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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application of

Applicant : Howard E. Rhodes and Luan Tran  
Serial No : 09/008,531  
Filed : January 16, 1998  
Title : **METHOD OF MAKING A SEMICONDUCTOR DEVICE  
HAVING IMPROVED CONTACTS**  
Docket : MIO 0012 V2 (94-0012.04)  
Examiner : M. Trinh  
Art Unit : 2822  
Conf. No : 6336

**MAIL STOP APPEAL BRIEF - PATENTS**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**CERTIFICATE OF MAILING**  
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on July 14, 2006.  
*Susan M. Tuna*  
Agent Reg. No. 38,769

**REPLY BRIEF**

This Reply Brief is being filed pursuant to the provisions of 37 CFR §41.41(a)(1) in response to the Examiner's Answer mailed May 22, 2006. Arguments responsive to the issues raised in the Answer are set forth below. Pursuant to § 41.43(a)(1), the Examiner is requested to acknowledge receipt and enter the reply brief.

Grounds of Rejection to be Reviewed on Appeal

Appellants acknowledge the Examiner's withdrawal of the rejection of claims 21-22, 24 and 31-32 under 35 U.S.C. 103(a) as being unpatentable over Bergemont (US 5,484,741) taken with Toshiyuki et al. (JP-05-109905) and Zamanian (US 5,793,111)

Accordingly, three grounds of rejection remain, namely, the rejection of claims 31-32 under 35 USC §112, second paragraph, as being indefinite; the rejection of claims 21-23 and 25 under 35 USC §102(e) as being anticipated by Jost et al. (US 5,563,089); and the rejection of claims 21-25 and 31-32 under 35 USC §102(e) as being anticipated by Jun (US 5,459,094).

Rejection of claims 31-32 under 35 U.S.C. 112, second paragraph

As indicated in the Appeal Brief filed on March 3, 2006, Appellants wish to reiterate their willingness to amend claim 31 to provide proper antecedent basis for the term "underlayer" so that claims 31 and 32 are in compliance with 35 U.S.C. 112, second paragraph.

Rejection under 35 U.S.C. 102(e) as being anticipated by Jost et al. (U.S. 5,563,089).

Appellants previously pointed out that that Jost et al. do not teach etching into the substantially vertical component of their conductive material as recited in appellants' claim 21. However, the Examiner asserts at page 8 of the Answer that conductive layer 40 of Jost et al. (Fig. 10) corresponds to the conductive layer 26 (Fig. 8) of appellants' application, and maintains that Jost et al. teach etching a contact hole in overlayer 44a in an overetch amount into the "substantially vertical component" of conductive layer 40, referring to Fig. 11 of Jost et al. However, the Examiner appears to have ignored appellants' claimed recitation of a substantially **vertical** component (claim 21) which is further defined as a localized thick region (claim 22). When comparing the conductive layer 40 with appellants' conductive layer 26, it is clear that Jost et al. do not teach etching into the substantially vertical component of the layer as appellants claim, i.e., the etching does not extend into the localized thick region of the vertical component as shown in appellants drawing figures and as claimed in claims 21-23. Rather, Jost et al.

etch to a point just above the region which would be considered a substantially vertical component as defined and claimed by appellants.

As Jost et al. do not teach a method of etching into the vertical component of their conductive layer, they cannot anticipate the claims.

Rejection under 35 U.S.C. 102(e) as being anticipated by Jun (U.S. 5,459,094).

In response to appellants' argument that Jun does not teach etching into, but not through the substantially vertical component of the conductive layer, the Examiner asserts that this is "clearly shown" in Figs. 4c, and 8c-8f of Jun. Again, the Examiner appears to have misinterpreted the meaning of appellants' claims. As clearly defined and shown in appellants' drawings, the area etched into is a **vertical** component having a localized thick region. The etched area of Jun does not extend into such a **vertical** region of conductive layer 16. At most, one skilled in the art would interpret Jun as etching into the **horizontal** portion of the conductive layer 16.


Accordingly, Jun does not anticipate the claims.

Conclusion

The claims are not anticipated by Jost et al. or Jun, neither of which teach overetching into, but not through a substantially vertical component of a conductive layer in a semiconductor device. The Board is requested to reverse all of the prior art rejections made by the Examiner in their entirety. Applicants stand ready to amend claim 31 to overcome the indefiniteness problem.

Respectfully submitted,

DINSMORE & SHOHL LLP

By   
Susan M. Luna  
Registration No. 38,769

One Dayton Centre  
One South Main Street, Suite 1300  
Dayton, Ohio 45402-2023  
(937) 449-6400  
Facsimile: (937) 449-6405